What is claimed is:

1. An XY stage, comprising:

a base;

a movable table disposed on said base so as to be movable in an X direction and a Y direction in an X-Y plane;

a work member provided on said movable table;

a first linear motor which gives a driving force in the X direction to said movable table at the same height as the center of gravity of a movable section composed of said movable table and said work member; and

a second linear motor which gives a driving force in the Y direction to said movable table at the same height as the center of gravity of said movable section.

2. The XY stage according to claim 1, wherein said first and second linear motors are directly connected to said movable table.

3. The XY stage according to claim 1, further comprising:

a first guide member fixed to the base and extends in the X direction;

a middle table which is guided by said first guide member to move in the X direction; and

a second guide member fixed to said middle table and extends in the Y direction,

wherein said movable table is guided in the Y direction by said second guide member.

4. The XY stage according to claim 1, wherein said work member is a bonding head and is used for wire bonding.

5. The XY stage according to claim 1, wherein each of the

first and second linear motors comprises:

a fixed element fixed to a support, said fixed element having an opening with a size equal to or greater than a movable range of said movable section at the side of said movable section;

a movable element connected to said movable table; and

a coil wound around said movable element and inserted into said opening.

6. The XY stage according to claim 5, wherein said coil is wound with a coil axis thereof being perpendicular to a surface of said movable table.

9 7. The XY stage according to claim 1, wherein each of the first and second linear motors comprises:

a fixed element fixed to a support, said fixed element having an opening running therethrough in a horizontal direction;

a movable element connected to said movable table; and

a coil wound around said movable element with a horizontal length equal to or greater than a movable range of said movable section, and inserted into said opening.

10 8. The XY stage according to claim 7, wherein said coil is wound with a coil axis thereof being parallel to the X direction or the Y direction.

11 9. The XY stage according to claim 1, wherein:

each of said first and second linear motors comprises:

a fixed element fixed to a support;

a movable element which is connected to said movable table; and

a coil wound around said movable element, and

said XY stage further comprises:

a first connection member which connects said movable element of said first linear motor to said movable table so that said movable element of said first linear motor can move in the Y direction independently of said movable table; and

a second connection member which connects said movable element of said second linear motor to said movable table so that said movable element of said second linear motor can move in the X direction independently of said movable table.

~~10.~~ 12. The XY stage according to claim ~~9~~ 11, wherein:

said first connection member comprises:

two first protruding portions disposed to said movable element of said first linear motor side by side in the X direction; and

a first protruding guide member fixed to said movable table, said first protruding guide member extending in the Y direction between said two first protruding portions, and

said second connection member comprises:

two second protruding portions disposed to said movable element of said second linear motor side by side in the Y direction; and

a second protruding guide member fixed to said movable table, said second protruding guide member extending in the X direction between said two second protruding portions.

11. The XY stage according to claim 9, wherein:

said first connection member comprises:

two first protruding portions disposed to said movable table side by side in the X direction; and

a first protruding guide member fixed to said movable element of said first linear motor, said first protruding guide member extending in the Y direction between said two first protruding portions, and

said second connection member comprises:

two second protruding portions disposed to said movable table side by side in the Y direction; and

a second protruding guide member fixed to said movable element of said second linear motor, said second protruding guide member extending in the X direction between said two second protruding portions.

12. The XY stage according to claim 9, wherein each of said first and second connection members is a linear movement guide device selected from the group consisting of a cross roller and a linear guide.

13. The XY stage according to claim 1, further comprising:

a first position detector disposed on a straight line extending in the X direction and passing through the center of gravity as viewed in a plan view, said first position detector detecting a movement amount of said movable section in the X direction; and

a second position detector disposed on a straight line extending in the Y direction and passing through the center of gravity as viewed in a plan view, said second position detector

detecting a movement amount of said movable section in the Y direction.

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14. The XY stage according to claim 1, further comprising a position detector disposed at the position of the center of gravity as viewed in a plan view, said position detector detecting movement amounts of said movable section in the X direction and the Y direction.

~~15~~ 16. The XY stage according to claim ~~13~~ 15, wherein each of said first and second position detectors comprises an optical sensor.

~~16~~ 20. The XY stage according to claim ~~14~~ 19, wherein said position detector comprises an optical sensor.

17. The XY stage according to claim ~~15~~ 16, wherein scale marks which respectively indicate movement amounts in the X and Y directions are provided on a surface of said base.

~~18~~ 21. The XY stage according to claim ~~16~~ 20, wherein scale marks which respectively indicate movement amounts in the X and Y directions are provided on a surface of said base.

~~19~~ 7. The XY stage according to claim 5, wherein each of said first and second linear motors comprises a magnetic circuit which generates a magnetic field in a vertical direction within said fixed element.

~~20~~ 8. The XY stage according to claim ~~19~~ 7, wherein said magnetic circuit comprises at least two magnets which are disposed so that opposite poles face each other along a vertical direction.

~~21~~ 18. The XY stage according to claim ~~13~~ 15, further comprising a feedback control section which controls an operation of each of

said first and second linear motors based on a movement amount detected by said position detectors.

22. The XY stage according to claim ~~14~~ 19, further comprising a feedback control section which controls an operation of each of said first and second linear motors based on a movement amount detected by said position detector.

23. The XY stage according to claim 1, wherein each of said first and second linear motors is an AC linear motor.